

# SOVIET AFFAIRS ANALYSIS SERVICE

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## THE SIGNIFICANCE OF THE SOVIET COSMONAUT

by

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Captain Nikolai Galay, once an officer in the White Army, served as an officer in the French Foreign Legion early in World War II. Later in the war, he was a battalion commander in the anti-Soviet army of General Vlasov. He now works with the Institute for the Study of the USSR as a specialist on the Soviet armed forces. In 1956 he contributed a chapter entitled "The Partisan Forces," based partly on his own experience, to B. H. Liddell Hart's compendium "The Red Army," published in New York by Harcourt, Brace and Co.

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The flight around the earth of the Soviet pilot Yuri Gagarin in the spaceship "Vostok" must be seen as part of the competition between the United States and the USSR to develop a more efficient vehicle for carrying a nuclear warhead. Previous similar attempts may have led to loss of life.

The Soviet leaders appear intent on using the flight also in their propaganda to consolidate the Communist movement throughout the world.

Because the development of space vehicles is considered in Moscow to have a great military significance, the effect of the Soviet space shot will be to accelerate rocket development in the Soviet Union.

This effect is an illustration of a process that can be called the "military revolution," that is, the primacy of military needs in the acquisition of new forms of power.

The Soviet success can be attributed to a timely realization of the importance of missiles in the Soviet Union, early preparation and the total mobilization of the Soviet scientific and economic resources.

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On April 12, 1961, a Soviet pilot, Yuri Gagarin, carried out a flight around the earth in the spaceship "Vostok" (East) and returned safely to earth. His flight marks the inception of a different peacetime attitude to military preparations and to propaganda. Gagarin's spaceship was the ninety-third launched since October 4, 1957, both in the East and West, either into an orbit around the earth or else into space. Of these launchings 58 were successful, 35 unsuccessful, stated the West German newspaper Muenchner Merkur on April 13, 1961, in hailing the space epoch.

We do not know whether the officially first manned space shot was preceded by failures and human sacrifices, since the Soviet press has had nothing to say on this matter. However, two Soviet reports do suggest that efforts were made by the USSR prior to Gagarin's flight to put a man into space. These are the reports on the deaths of Lt. General Pavlovsky, Deputy Chief of the General Staff (Pravda, October 24, 1960) and of Chief Marshal of artillery, Mitrofan I. Nedelin, Commander-in-Chief of the Soviet rocket forces (Pravda, October 27, 1960). The later issue of Pravda reported that both had died in air crashes while on active duty. The reports suggested that numerous persons perished in some way during an attempt to launch a space ship.

The first manned space flight must be seen as part of the competition between the two most powerful states in the world to develop the latest forms of rockets and missiles. The building of the spaceship "Vostok" is thus merely a subsidiary aspect of the overall development of missiles intended to carry nuclear weapons. All Soviet and American rockets--the sputniks, luniks, Explorers, Pioneers and others--which have been developed in the last four years, are milestones of this development. The Soviet success emphasizes the leading role of the USSR in it--a role which is fraught with political consequences.

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The military significance of Gagarin's flight is that it more clearly shows the U.S. missile gap. This gap has been especially noticeable during the last three and a half years. The Soviet leaders have left no doubt that they also intend to exploit their space success for political ends--to consolidate the Communist system throughout the world. Premier Khrushchev, for example, has stated:

...In this victory is a new triumph of the ideas of Lenin, a confirmation of the correctness of Marxist-Leninist teachings.... This achievement marks a new upsurge of our country in its advance toward Communism.... The movement of peoples toward Communism, the noble striving of peoples toward this great goal cannot be belittled or stopped. This movement has acquired...unconquerable strength, and there are no barriers which could stop this great progress in the development of mankind (Pravda, April 14, 1961).

Coupled with the military potential of the space flight, the emphasis on the political aspects of the flight will compel the United States to push ahead with its man-in-space program, regardless of the military importance the flight of Gagarin may have at present. Thus, in spite of sincere efforts by both the USSR and United States to reduce armaments expenditures, the immediate result of the flight will be an acceleration of rocket development in both countries, creating a major hindrance at the Geneva disarmament talks.

Were the Soviets aware of this inevitable development, and if so, were they anxious for just such a result? The USSR is undergoing various economic difficulties as a result of demands from Red China and the satellites and of pressure by the Soviet population. Hence the Soviet leaders could not have wished for a renewal of the armaments race. The unwelcome consequence of the Soviet space success illustrates one aspect of that process which can be called the "military revolution," that is, the mastery of military needs over new forms of power. Such a process demands that development continue until no further progress can be made.

Gagarin's flight was a typical stage in the process of the modern "military revolution." The importance of this stage becomes clear when we consider the role of rockets, sputniks, and spaceships as possible carriers of nuclear weapons. The role of intermediate and long-range missiles (IREM's and ICBM's) as carriers of nuclear weapons is well known. Less well known is the potential of the sputnik and what the Soviets call a spaceship as carriers of nuclear weapons. With the aid of an additional rocket, they can dispatch a nuclear load to any preselected point on earth. In other words, they are space bombs or large guided missiles of the "air-to-earth" type, capable of remaining in an orbit for a considerable length of time and then, on orders from the earth, striking at a particular target. It would be more difficult to find an effective means of defense against such missiles than against the intercontinental "earth-to-earth" missiles, since the flight of a missile from a sputnik would be much shorter than that of an ICBM, which needs about half-an-hour to cover 8,000 - 10,000 kilometers. The in-

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vulnerability of sputniks carrying nuclear weapons means that, in the event of a preventive attack by an enemy on ground bases, the sputnik-equipped country, no matter what happened, would preserve a part of its "means of retaliation." The effect upon morale made by such constantly threatening sputniks, flying overhead every half hour, would be much greater than that of strategic air force units, which, though air-borne, are far from their target.

We do not know just how accurate the landings of recent Soviet spaceships have been, but since the ground personnel has had little difficulty in finding the ship cabins, we can presume that they were reasonably accurate. . . The reports on the landing of an animal-carrying spaceship on August 18, 1960, noted that it came down ten kilometers from the projected landing site (Pravda, August 20 to 23, 1960). If true, the reports show that spaceships are at present less reliable than "earth-to-earth" inter-continental missiles. They are thus not satisfactory for military needs, since hydrogen bombs with a radius of destruction of more than 10 kilometers would be required. However, there can be no doubt that we shall not have to wait long for greater accuracy in landing.

A third important aspect, confirmed not only by the flight of the "Vostok" but by those of other types of missiles, is that they are capable of using more efficient fuel. This means that heavy Soviet rockets will continue to occupy a dominant position.

We can reach two main conclusions:

1. Soviet scientists and technicians are capable of launching heavier missiles than their American counterparts are. The "Vostok," without the last stage of the rocket, weighed more than 4.5 tons. The American Redstone has a final weight of one ton. American technicians are compelled to design equipment and instruments of smaller dimensions, a fact which has a harmful effect on the strength and reliability of construction.

2. The development of Soviet missiles and spaceships has been consistent--adequate proof of clear planning and an ability to concentrate efforts. The first stage, 1957 to 1958, was marked by work on the ordinary sputniks; 1959 can be called the year of the space rockets (3 luniks); 1960 and the beginning of 1961 were the period of spaceships.

The Soviet success can be attributed to a timely realization of the importance of missiles, early preparation, and the total mobilization of Soviet scientists and engineers, who were given the necessary means with the same generosity as during a "hot" war. The important factors governing this development were: (1) the close co-operation between disciplines of military science and the general sciences; (2) the nature of the Communist regime, which is constantly at war with the rest of the world, a war which is either "hot" or "cold," total or localized, economic or political, psychological or ideological.

War, of course, has always acted as a catalyst of technological progress. The Soviet state and economic structure are primarily adjusted to fulfill

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military needs. In the USSR, science and technology are developing at the speed with which they developed during the war, that is, faster than in the democratic countries, particularly in the sphere of military technology. The democracies can, in the period of a hot war, make remarkable efforts, as both world wars have shown. However, the failure of a democratic society to realize that periods of "peaceful coexistence" are also wars is a major obstacle in its competition with totalitarian Communism.

In its struggle against the non-Communist world, the Communist movement has made science and technological progress a genuine military factor, intended not only to insure material superiority but also to impress on its own peoples and the rest of the world the superiority of Soviet science and technology over the capitalist world. The Soviet ability to display successes in the best possible light and to conceal failures and to play down the successes of the opponent is one of the most important factors in the psychological struggle. The fact, for example, that the United States development of "ground-to-ground" missiles has already overcome most of the lag in this field is known only to the specialists and not to the general public.

At present, the main importance of Gagarin's flight is that the Communist leaders now have additional possibilities of exerting psychological pressure on their own people and of using their technological achievements to make an impression on the peoples in the non-Communist world, in the hope that a lack of restraint and discipline in a free society will, under the influence of Soviet success, lead to a weakening in the morale of the West.